



Benjamin GEIGER

Serial No.: 10/524,275

Filed: February 11, 2005

For: AKAP84 AND ITS USE FOR VISUALIZATION  
OF BIOLOGICAL STRUCTURES

Examiner: unknown

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450



Group Art Unit: 1654

Attorney  
Docket: 29140

## INFORMATION DISCLOSURE STATEMENT

Sir:

Enclosed is a PTO Form 1449 which lists citations which may be material to the patentability and examination of the above identified application. Also enclosed are copies of the references cited. These are submitted in compliance with the duty of disclosure defined in 37 CFR 1.56. The Examiner is requested to make these citations of official record in this application.

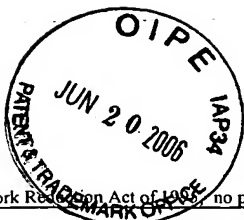
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Respectfully submitted,

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Dated: June 17, 2006



PTO/SB/08a (08-03)

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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)				<b>Complete if Known</b>	
				Application Number	10/524,275
				Filing Date	February 11, 2005
				First Named Inventor	Benjamin GEIGER
				Art Unit	1654
				Examiner Name	unknown
Sheet	1	of	4	Attorney Docket Number	29140

**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
	1	US-2002/025536	02-28-2002	Ewert et al.	

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Documents	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				
	2	PCT WO 97/08553	06-6-1997	Schneewind et al.		
	3	PCT WO 92/20791	11-26-1992	Winter et al.		
	4	PCT WO 91/17271	11-14-1991	Dower et al.		
	5	PCT WO 92/01047	01-23-1992	McCafferty et al.		
	6	PCT WO 92/09690	06-11-1992	Garrard et al.		
	7	PCT WO 92/15679	09-17-1992	Markland et al.		
	8	PCT WO 92/18619	10-29-1992	Kang et al.		
	9	PCT WO 93/01288	01-21-1993	Breitling et al.		
Examiner Signature				Date Considered		

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<sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. this collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS.

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Substitute for form 1449A/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>				Complete if Known	
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				Examiner Name	unknown
Sheet	2		4	Attorney Docket Number	29140
OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS					
Examiner Initials	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.			T <sup>2</sup>
	10	Furusawa Makoto et al. "AMY-1, A C-Myc-Binding Protein, Is Localized in the Mitochondria of Sperm by Association With S-AKAP84, An Anchor Protein of cAMP-Dependent Protein Kinase", The Journal of Biological Chemistry, 276(39): 36647-36651, 2001.			
	11	Alam et al. "Germ Line Transmission and Expression of A LacZ Containing Transgene in Tilapia (Oreochromis Niloticus)", Transgenic Research, 5: 87-95, 1996.			
	12	Jockusch et al. "The Molecular Architecture of Focal Adhesions", Annual Reviews of Cell Development Biology, 11: 379-416, 1995.			
	13	Janmey "Phosphoinositides and Calcium as Regulators of Cellular Actin Assembly and Disassembly", Annual Reviews of Physiology, 56: 169-191, 1994.			
	14	Barras III "Assembly of Combinatorial Antibody Libraries on Phage Surfaces: The Gene III Site", Proc. Natl. Acad. Sci. USA, 88: 7978-7982, 1991.			
	15	Bilang et al. "The 3'-Terminal Region of the Hygromycin-B-Resistance Gene Is Important for Its Activity in Escherichia Coli and Nicotiana Tabacum", Gene, 100: 247-250, 1991.			
	16	Brinkley "A Brief Survey of Methods for Preparing Protein Conjugates With Dyes, Haptens, and Cross-Linking Reagents", Bioconjugate Chemistry, 3: 2-13, 1992.			
	17	Brousseau et al. "Hyperalphalipoproteinemia in Human Lecithin Cholesterol Acyltransferase Transgenic Rabbits", The Journal of Clinical Investigation, 97(8): 1844-1851, 1996.			
	18	Geiger et al. "The Cytoplasmic Domain of Adherens-Type Junctions", Cell Motility and the Cytoskeleton, 20: 1-6, 1991.			
	19	Clackson et al. "Making Antibody Fragments Using Phage Display Libraries", Nature, 352: 624-628, 1991.			
	20	Cozzi et al. "Longitudinal Analysis of the Expression of Human Decay Accelerating Factor (HDAF) on Lymphocytes, in the Plasma, and in the Skin Biopsies of Transgenic Pigs", Xenotransplantation, 3: 128-133, 1996.			
	21	Tsukita et al. "Molecular Linkage Between Cadherins and Actin Filaments in Cell-Cell Adherens Junctions", Current Opinion in Cell Biology, 4: 834-839, 1992.			
	22	Damak et al. "Improved Wool Production in Transgenic Sheep Expressing Insulin-Like Growth Factor 1", Bio/Technology, 14: 185-188, 1996.			
	23	Danon et al. "Light Regulated Translational Activators: Identification of Chloroplast Gene Specific mRNA Binding Proteins", The EMBO Journal, 10(13): 3993-4001, 1991.			
	24	De Block et al. "Transformation of Brassica Napus and Brassica Oleracea Using Agrobacterium Tumefaciens and the Expression of the Bar and Neo Genes in the Transgenic Plants", Plant Physiology, 91: 694-701, 1989.			
	25	Deng et al. "Selection of Antibody Single-Chain Variable Fragments With Improved Carbohydrate Binding by Phage Display", The Journal of Biological Chemistry, 269(13): 9533-9538, 1994.			
	26	Dower "Electroporation of Bacteria: A General Approach to Genetic Transformation", Genetic Engineering, Principles and Methods, 12: 275-296, 1990.			
	27	Duncker et al. "Expression of A Cystine-Rich Fish Antifreeze in Transgenic Drosophila Melanogaster", Transgenic Research, 5: 49-55, 1996.			
	28	Duncker et al. "Antifreeze Protein Does Not Confer Cold Tolerance to Transgenic Drosophila Melanogaster", Cryobiology, 32: 521-527, 1995.			

29	Dziadek "Transgenic Animals: How They Are Made and Their Role in Animal Production and Research", Australian Veterinary Journal, 73(5): 182-187, 1996.	
30	Faux et al. "Molecular Glue: Kinase Anchoring and Scaffold Proteins", Cell, 85: 9-12, 1996.	
31	Fuchs et al. "Targeting Recombinant Antibodies to the Surface of Escherichia Coli: Fusion to A Peptidoglycan Associated Lipoprotein", Bio/Technology, 9: 1370-1372, 1991.	
32	Garrard et al. "Fab Assembly and Enrichment in A Monovalent Phage Display System", Bio/Technology, 9: 1373-1377, 1991.	
33	Garrard et al. "Selection of An Anti-IGF-1 Fab From A Fab Phage Library Created by Mutagenesis of Multiple CDR Loops", Gene, 128: 103-109, 1993.	
34	Glatz et al. "Cellular Fatty Acid-Binding Proteins: Their Function and Physiological Significance", Progressive Lipid Research, 35(3): 243-282, 1996.	
35	Gram et al. "In Vitro Selection and Affinity Maturation of Antibodies From A Naive Combinatorial Immunoglobulin Library", Proc. Natl. Acad. Sci. USA, 89: 3576-3580, 1992.	
36	Griffiths et al. "Human Anti-Self Antibodies With High Specificity From Phage Display Libraries", The EMBO Journal, 12(2): 725-734, 1993.	
37	Guerche et al. "Direct Gene Transfer by Electroporation in Brassica Napus", Plant Science, 52: 111-116, 1987.	
38	Hanahan et al. "Plasmid Transformation of Escherichia Coli and Other Bacteria", Methods in Enzymology, 204: 63-113, 1991.	
39	Hawkins et al. "Selection of Phage Antibodies by Binding Affinity. Mimicking Affinity Maturation", Journal of Molecular Biology, 226: 889-896, 1992.	
40	Hawkins et al. "The Contribution of Contact and Non-Contact Residues of Antibody in the Affinity of Binding to Antigen. The Interaction of Mutant D1.3 Antibodies With Lysozyme", Journal of Molecular Biology, 234: 958-964, 1993.	
41	Hay et al. "Bacteriophage Cloning and Escherichia Coli Expression of A Human IgM Fab", Human Antibody Hybridomas, 3: 81-85, 1992.	
42	Hoogenboom et al. "Multi-Subunit Proteins on the Surface of Filamentous Phage: Methodologies for Displaying Antibody (Fab) Heavy and Light Chains", Nucleic Acids Research, 19(15): 4133-4137, 1991.	
43	Horsch et al. "A Simple and General Method for Transferring Genes Into Plants", Science, 227: 1229-1231, 1985.	
44	Howell et al. "Cloned Cauliflower Mosaic Virus DNA Infects Turnips (Brassica Rapa)", Science, 208: 1265-1267, 1980.	
45	Huse et al. "Generation of A Large Combinatorial Library of the Immunoglobulin Repertoire in Phage Lambda", Science, 246(4935): 1275-1281, 1989.	
46	Knudsen et al. "Interction of $\alpha$ -Actinin With the Cadherin/Catenin Cell-Cell Adhesion Complex Via $\alpha$ -Catenin", The Journal of Cell Biology, 130(1): 67-77, 1995.	
47	Itoh et al. "Involvement of ZO-1 in Cadherin-Based Cell Adhesion Through Its Direct Binding to $\alpha$ Catenin and Actin Filaments", The Journal of Cell Biology, 138(1): 181-192, 1997.	
48	Kang et al. "Linkage of Recognition and Replication Functions by Assembling Combinatorial Antibody Fab Libraries Along Phage Surfaces", Proc. Natl. Acad. Sci. USA, 88: 4363-4366, 1991.	
49	Keller et al. "In Vivo Particle-Mediated Cytokine Gene Transfer Into Canine Oral Mucosa and Epidermis", Cancer Gene Therapy, 3(3): 186-191, 1996.	
50	Kim et al. "Neuron-Specific Expression of A Chicken Gicerin cDNA in Transient Transgenic Zebrafish", Neurochemical Research, 21(2): 231-237, 1996.	
51	Klein et al. "High-Velocity Microprojectiles for Delivering Nucleic Acids Into Living Cells", Nature, 327:70-73, 1987.	
52	Kroshus et al. "Expression of Human CD59 in Transgenic Pig Organs Enhances Organ Survival in An Ex Vivo Xenogeneic Perfusion Model", Transplantation, 61(10): 1513-1521, 1996.	
53	Lai et al. "An Extended Family of Protein-Tyrosine Kinase Genes Differentially Expressed in the Vertebrate Nervous System", Neuron, 6: 691-704, 1991.	
54	Lin et al. "Characterization of S-AKAP84, A Novel Developmentally Regulated A Kinase Anchor Protein of Male Germ Cells", The Journal of Biological Chemistry, 270(46): 27804-27811, 1995.	
55	Lo "Animal Models of Human Disease. Transgenic and Knockout Models of	

		Autoimmunity: Building A Better Disease?", Clinical Immunology and Immunobiology, 79(2): 96-104, 1996.	
	56	Lorimer et al. "Recombinant Immunotoxins Specific for A Mutant Epidermal Growth Factor Receptor: Targeting With A Single Chain Antibody Variable Domain Isolated by Phage Display", Proc. Natl. Acad. Sci. USA, 93: 14815-14820, 1996.	
	57	McCafferty et al. "Phage Antibodies: Filamentous Phage Displaying Antibody Variable Domains", Nature, 348: 552-554, 1990.	
	58	Mitchell et al. "Transgene Expression in the Rhesus Cervix Mediated by An Adenovirus Expressing $\beta$ -Galactosidase", American Journal of Obstetrical Gynecology, 174: 1094-1101, 1996.	
	59	Ndubuka et al. "Expression of A Kinase Anchor Protein 75 Depletes Type II cAMP-Dependent Protein Kinases From the Cytoplasm and Sequesters the Kinases in A Particulate Pool", The Journal of Biological Chemistry, 268(11): 7621-7624, 1993.	
	60	Neuhaus et al. "Transgenic Rapeseed Plants Obtained by the Microinjection of DNA Into Microspore-Derived Embryoids", Theoretical Applied Genetics, 75: 30-36, 1987.	
	61	Rimm et al. " $\alpha$ 1(E)-Catenin Is An Actin-Binding Protein Mediating the Attachment of F-Actin to the Membrane Adhesion Complex", Proc. Natl. Acad. Sci. USA, 92: 8813-8817, 1995.	
	62	Rexroad Jr. et al. "Evaluation of Co-Culture as A Method for Selecting Viable Microinjected Sheep Embryos for Transfer", Animal Biotechnology, 1(1): 1-10, 1990.	
	63	Rubin "A Kinase Anchor Proteins and the Intracellular Targeting of Signals Carried by Cyclic AMP", Biochimica et Biophysica Acta, 1224: 467-479, 1994.	
	64	Sastry et al. "Cloning of the Immunological Repertoire in Escherichia Coli for Generation of Monoclonal Catalytic Antibodies: Construction of Heavy Chain Variable Region-Specific cDNA Library", Proc. Natl. Acad. Sci. USA, 86: 5728-5732, 1989.	
	65	Mittelsten Scheid et al. "Reversible Inactivation of A Transgene in Arabidopsis Thaliana", Molecular Gene & Genetics, 228: 104-112, 1991.	
	66	Scott et al. "Localization of A-Kinase Through Anchoring Proteins", Molecular Endocrinology, 8(1): 5-11, 1994.	
	67	Shanahan et al. "Regulation of Expression of A Sheep Metallothionein 1A-Sheep Growth Hormone Fusion Gene in Transgenic Mice", Molecular and Cellular Biology, 9(12): 5473-5479, 1989.	
	68	Shen et al. "Transgenic Rabbits With the Integrated Human 15-Lipoxygenase Gene Driven by A Lysozyme Promoter: Macrophage-Specific Expression and Variable Positional Specificity of the Transgenic Enzyme", The FASEB Journal, 9: 1623-1631, 1995.	
	69	Simoens et al. "Genetic Engineering in Plants", Human Reproduction Update, 1(6): 523-542, 1995.	
	70	Wagner et al. "The Renin-Angiotensin System in Transgenic Rats", Pediatric Nephrology, 10: 108-112, 1996.	
	71	Wall et al. "Synthesis and Secretion of the Mouse Whey Acidic Protein in Transgenic Sheep", Transgenic Research, 5: 67-72, 1996.	
	72	Wall "Transgenic Livestock: Progress and Prospects for the Future", Theriogenology, 45: 57-68, 1996.	
	73	Whitehorn et al. "A Generic Method for Expression and Use of 'Tagged' Soluble Versions of Cell Surface Receptors", Bio/Technology, 13: 1215-1219, 1995.	
	74	Wilks "Two Putative Protein-Tyrosine Kinases Identified by Application of the Polymerase Chain Reaction", Proc. Natl. Acad. Sci. USA, 86: 1603-1607, 1989.	
	75	Zebedee et al. "Human Combinatorial Antibody Libraries to Hepatitis B Surface Antigen", Proc. Natl. Acad. Sci. USA, 89: 3175-3179, 1992.	

Signature		Considered	
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